IN THE CLAIMS:

Please substitute the following claims for the same-numbered claims in the application:

1-8. (Canceled).

9. (Currently Amended) A semiconductor layer for use in a bipolar transistor, said semiconductor layer comprising:

carbon atoms; and

a doped region that comprises less than all of said semiconductor layer and comprises a dopant interacting with said carbon atoms,

wherein said carbon atoms limit outdiffusion of said dopant to physically limit a size of said doped region within said semiconductor layer, and wherein said dopant is included in sufficient quantities to reduce a resistance of said semiconductor layer to less than approximately 4 Kohms/cm^2.

10. (Currently Amended) The semiconductor layer in claim 9, wherein said dopant is included in a peak concentration of approximately 1×10^{20} per cm^3 to 1×10^{21} per cm^3.

11. (Currently Amended) The semiconductor layer in claim 9, wherein said dopant comprises one of boron, aluminum, gallium, indium, and titanium.

12. (Currently Amended) The semiconductor layer in claim 9, further comprising silicon germanium.

13. (Currently Amended) The semiconductor layer in claim 9, wherein said carbon atoms maintain said dopant within a central portion of said semiconductor layer.

14-31. (Canceled).

32. (Currently Amended) A semiconductor layer for use in a bipolar transistor, said semiconductor layer comprising:

a single crystalline region;

a polycrystalline region adjacent said single crystalline region;

carbon atoms within said single crystalline region and said polycrystalline region; and

a doped region in said single crystalline region adjacent said polycrystalline region,

wherein said doped region comprises a dopant interacting with said carbon atoms,

wherein said carbon atoms limit outdiffusion of said dopant such that a size of said doped region is physically limited within said semiconductor layer, and

wherein said dopant is included in sufficient quantities to reduce a resistance of said semiconductor layer ~~and provide improved electrostatic discharge protection of said bipolar transistor~~.

33. (Currently Amended) The semiconductor layer in claim 32, wherein said dopant is included in a peak concentration of approximately 1×10^{20} per cm^3 to 1×10^{21} per cm^3.

34. (Currently Amended) The semiconductor layer in claim 32, wherein said doped region is aligned with another doped region in a ~~collector of said bipolar transistor~~ second semiconductor layer.

35. (Currently Amended) The semiconductor layer in claim 32, wherein said polycrystalline region is positioned adjacent a shallow trench isolation structure in a ~~collector of said bipolar transistor~~ second semiconductor layer.

36. (Currently Amended) The semiconductor layer in claim 32, wherein said carbon atoms maintain said dopant within a central portion of said semiconductor layer between ~~an emitter contact and a base contact of said bipolar transistor~~ two contacts.

37. (Currently Amended) The semiconductor layer in claim 32, wherein said carbon atoms reduce strain within said semiconductor layer.

38. (Currently Amended) A semiconductor layer for use in a bipolar transistor, said semiconductor comprising:

a single crystalline region;

a polycrystalline region adjacent said single crystalline region;

a doped region in said single crystalline region adjacent said polycrystalline region; and,

carbon atoms within said single crystalline region and said ploycrystalline region;

wherein said carbon atoms limit outdiffusion of said dopant such that a size of said doped region within said semiconductor layer is physically limited to increase ~~speed and control~~ breakdown voltage ~~of said bipolar transistor~~.

39. (Currently Amended) The semiconductor layer of claim 38, wherein said dopant is included in a peak concentration of approximately 1×10^{20} per cm^3 to 1×10^{21} per cm^3.

40. (Currently Amended) The semiconductor layer of claim 38, wherein said doped region is aligned with another doped region in a ~~collector of said bipolar transistor~~ second semiconductor layer.

41. (Previously Presented) The semiconductor in claim 38, wherein said polycrystalline region is positioned adjacent a shallow trench isolation structure in a ~~collector of said bipolar transistor~~ second semiconductor layer.

42. (Currently Amended) The semiconductor layer of claim 38, wherein said carbon atoms maintain said dopant within a central portion of said semiconductor layer between ~~an emitter contact and a base contact of said bipolar transistor~~ two contacts.

43. (Currently Amended) The semiconductor layer in claim 38, wherein said carbon atoms reduce strain within said semiconductor layer.